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He explained its position in front of the tibia as a supposed process of the astragalus, by calling attention to the excessive tendency to anchylosis in birds. The widening of the tibia to include all the tarsals within its width necessarily brings the intermedium in front of the tibia, and, as it early unites with the astragalus, has naturally been mistaken.

Mr. Morse had been able to confirm his opinion regarding the nature of this bone in studying the embryos of the common tern at Penikese Island. In the embryo bird the intermedium appeared as a long oval bone between the astragalus and calcaneum, passing up between the tibia and fibula as seen in the lower reptiles.

In this connection it is interesting to observe that in the mammalia the intermedium does not occur, and Gegenbaur has expressed the opinion that the astragalus of mammals represents the astragalus and intermedium united. These investigations might possibly go to confirm that opinion in the fact that in reptiles the intermedium is separate; in birds it is separate in the young bird, but connected with the astragalus in the adult state, while in mammals, if Gegenbaur be right, it is always so connected.

GEOLOGY.

Return of Professor Marsh's Expedition.—Professor Marsh and party returned to New Haven, Dec. 12th, after an absence of two months in the West. The object of the present expedition was to examine a remarkable fossil locality, discovered during the past summer in the "Bad Lands" south of the Black Hills. The explorations were very successful, notwithstanding extremely cold weather, and the continued hostility of the Sioux Indians. The latter refused to allow the expedition to cross White River, but a reluctant consent was at last obtained. They afterward stopped the party on the way to the "Bad Lands," attempted a night attack on their camp, and otherwise molested them, but the accompanying escort of U. S. troops proved sufficient for protection. The fossil deposits explored were mainly of Miocene age, and although quite limited in extent, proved to be rich beyond expectation. Nearly two tons of fossil bones were collected, most of them rare specimens, and many unknown to science. Among the most interesting remains found were several species of gigantic *Brontotheridæ*, nearly as large as elephants. At one point these bones were heaped together in such numbers as to indicate that the animals lived in herds, and had been washed into this ancient lake by a freshet. Successful explorations were made, also, in the Pliocene strata of the same region. All the collections secured go to Yale College, and will soon be described by Professor Marsh.

SUMMER SCHOOL OF GEOLOGY.—The great difficulty that all students of practical geology meet at the outset of their career is to obtain proper instruction in the methods of working in the field. With a view to meet this need the teachers of geology at Harvard University have determined, with the consent of its governing body, to begin a system of summer instruction intended for the proper geological training of persons having sufficient preliminary knowledge to pursue field studies with profit. The school will be established in a camp to be formed in the state of Kentucky, in the immediate neighborhood of Cumberland Gap. This place offers great advantages for the pursuit of such studies. In that neighborhood a section from the Potsdam sandstone to the middle carboniferous can be easily traced, and it is in the midst of the noble mountain structure of the Appalachians, and affords great advantages for the study of dynamic geology. At the same time the situation is entirely healthy, being elevated more than fifteen hundred feet above the sea, thus avoiding all malaria and the extreme heat of lower regions.

The instruction will include lectures on different subjects connected with geology, by a competent corps of instructors, and practice in field work. Opportunities will be thus afforded for the study of dynamic geology, paleontology, chemical geology, with something of zoology and botany.

Students will be required to pay in advance for the instruction and use of camp furniture, the fee of fifty dollars, and will also be required to pay weekly in advance the actual cost of their subsistence, which is expected not to exceed three dollars per week.

The first term will be continued for about ten weeks, or from July 1st to Sept. 1st, 1875. Transportation of students from the nearest railway stations in Kentucky and Tennessee will be provided at actual cost. An effort will be made to secure a reduction of fare to students travelling to and fro from the camp.

This school is meant especially for teachers of natural science, and those who are desirous of pursuing the study of geology in a practical and efficient fashion, and it will therefore be limited to persons of some training fitting them for such work. The number will be limited to twenty-five, and the school will not be begun if there are less than ten applicants. Persons desirous of joining the school should apply to F. W. Harris, President's Secretary, Harvard University, Cambridge, Mass.—N. S. S.

Ancient Lake Basins of the Rocky Mountains.—The existence of several large fresh water lakes in the Rocky Mountain region, remarks Prof. Marsh (in the American Journal of Science and Arts, Jan., 1875), is now well established, mainly through the researches of explorers whom the striking scenery of the "Bad Lands," or the extinct animals entombed in them, have attracted thither. The oldest are of Eocene age. The one best known forms the Green River basin, and the sediments are at least 6,000 feet in thickness. The animal remains found in these strata are those of tapir-like mammals, monkeys, crocodiles, lizards and serpents, and betoken a tropical climate. The lake basin of the "Bad Lands" of Nebraska is of Miocene age, and the strata are about 300 feet thick. The assemblage of animals indicates a climate less tropical than that of the Eocene lakes, as seen in the absence of monkeys, and the scarcity of reptilian life. The Brontotheridæ, the largest known Miocene mammals, are peculiar to the lower strata of this basin. The late tertiary or Pliocene basin, Marsh calls the Niobrara basin; it extended from Nebraska nearly to the Gulf of Mexico. The strata are nearly or quite 1,500 feet thick. The fauna indicates a warm temperate climate, the more common animals being a mastodon, rhinoceroses, camels, and horses, the latter being especially abundant.

ANTHROPOLOGY.

Copper as a Preservative of Animal and Vegetable Substances.—In examining an old Indian burying ground at Harpswell, Maine, several pieces of leather and strips of nicely twisted grass fibres were found which were fastened together at the sides with a tough grass thread passing through at intervals about an inch, though some of them were woven together. With these were embedded several copper tubes, and some thin sheets of copper; the corroding of the latter so impregnated the former that they